

Testicular Cysts: A Case Report and Review of a Recent Tripler Experience

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A case of an unusually large, multilocular testicular cyst was presented and managed at Tripler Army Medical Center. Of 834 consecutive scrotal ultrasounds, 30 intratesticular cysts were seen (3.6 %). In contrast, of 892 consecutive testis pathology specimens, only one case was found (0.11 %). These findings support those of previous reports suggesting a much greater prevalence of testicular cysts than are clinically significant. Diagnostic and therapeutic recommendations are presented.

Case Report

A healthy 72-year-old Samoan was referred to the Tripler Urology Clinic in June 1994 with a complaint of progressive left scrotal swelling and discomfort for 6 months. He denied experiencing genitourinary infection or trauma and the physical exam revealed a large, firm left scrotal mass which was partially transilluminating. The serum tumor markers were normal (beta-HCG < 10 mIU/ml and alpha-fetoprotein = 8 ng/ml).

A scrotal ultrasound was ordered (Fig 1), which revealed an 8x4x4 cm multiloculated cystic lesion displacing a small rim of left testis. Additionally, a small left spermatocele and a small left hydrocele were identified.

On the basis of the patient's symptoms and the ultrasound findings, an elective left inguinal orchiectomy was performed and the patient recovered uneventfully (Fig 2).

Histologic evaluation demonstrated a testicular cyst with a flattened, non-ciliated epithelium (Fig 3). There was no evidence of malignancy.

Discussion

Clinically significant intratesticular cysts are rare. Dmochowski et al carefully reviewed the literature in 1989 and found 12 acceptably reported cases of testicular cysts, all unilocular. They also reported 5 new cases, one of which was multilocular.¹ Since that time others have reported small numbers of surgical cases; to date only 20 unilocular and 4 multilocular testis cysts have been described.²⁻⁴

On the other hand, testis cysts detected incidentally by ultrasonography are much more common. The combined results of several recent studies in the radiologic literature demonstrate that an additional 53 testicular cysts have been incidentally diagnosed during consecutive scrotal ultrasound exams in 1194 patients (4.4% overall).⁵⁻⁷

We reviewed the recent Tripler experience with testicular cysts in order to further evaluate this apparently large difference between actual and clinical prevalence (Table 1). A review of all testis pathology reports from January 1987 to December 1994 revealed that ours was the only testicular cyst surgically removed, representing 0.11% of the 892 testis pathology cases reviewed. In contrast, review of scrotal ultrasound reports from January 1992 to December 1994 yielded 30 testicular cysts, representing 3.6% of the 834 studies performed.

Table 1.—Recent Testicular Cysts Diagnosed at Tripler Army Medical Center

Source of Diagnostic Information	Total Number of Cases Reviewed	Number of Cysts Identified	Percentage of Cases with Cysts
Testis Pathology Cases	892	1	0.11
Scrotal Ultrasounds	834	30	3.6

Intratesticular cysts are usually small. Those cysts incidentally detected by ultrasound are typically in the range of 2 mm to 5 mm in diameter, and none has been reported larger than 18 mm.⁵⁻⁷ Palpable or symptomatic cysts are occasionally larger. Nevertheless only 3 cysts greater than 20 mm in diameter have been described, the largest being an 8 cm unilocular cyst.¹ Our case represents the largest multiloculated testicular cyst reported.

The diagnostic sonographic criteria of a benign intratesticular cyst are the same as those of a renal cyst: sharply defined walls, no internal echoes, and enhanced posterior wall sound transmission.⁸ The distinction between an intratesticular cyst and other

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well-described cystic lesions of the testis, such as epidermoid cysts, tunica albuginea cysts, cysts associated with neoplasm, and cystic dysplasia of the testis, should be readily accomplished by ultrasound given the unique sonographic appearance of these entities.^{6,9-11} Because of the unusually large size of our patient's lesion, malignancy could not be excluded by ultrasound and an inguinal orchiectomy was performed.

Histologically, the diagnosis of an intratesticular cyst is confirmed when the lumen contains clear, acellular fluid, and is surrounded by a discrete wall of fibrous tissue lined with flat to cuboidal epithelium without evidence of teratoma, carcinoma, chronic inflammation or fibrosis in the remainder of the testis.¹

The etiology of intratesticular cysts is uncertain. Congenital, infectious, and traumatic causes have all been proposed but not proven.¹²⁻¹⁴ Our case had no features to support any of these possibilities. There are no reports in the literature of malignant degeneration of a testis cyst.

Based on the low number of clinically significant cysts relative to those found on ultrasound, it is apparent that many intratesticular cysts will not require removal. Occasionally, as in our case, surgery will be indicated for relief of symptoms. Surgical removal of testicular lesions has traditionally meant orchiectomy, however, the continued improvement of sonography has allowed better intratesticular localization so that parenchymal-sparing excision of non-neoplastic masses including cysts is now feasible.¹⁴⁻¹⁵

Conclusions

We report a rare and unusually large, benign, multiloculated testicular cyst presenting in a symptomatic elderly patient. Typically, testicular cysts are small (<2 cm) and are discovered incidentally by ultrasound. Clinically significant intratesticular cysts are uncommon. The sonographic diagnosis is usually straightforward. When the diagnosis is clear, surgery should be reserved for symptomatic patients and should involve sparing testicular parenchyma when possible.

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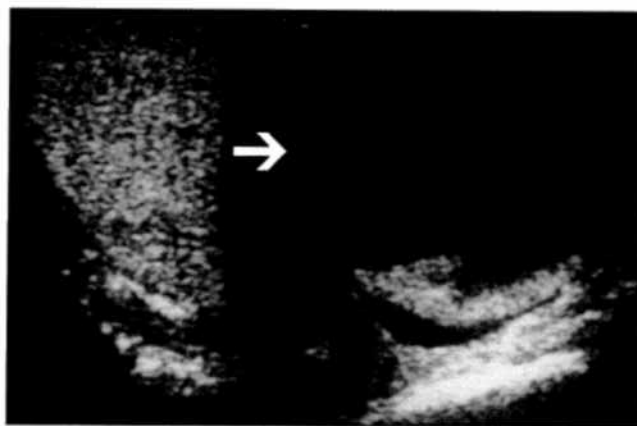


Fig 1.—Transverse image of scrotal ultrasound revealing large left testicular cyst and small rim of normal appearing testis. Right testis is normal.



Fig 2.—Bivalved left testis. Note septations seen in multilocular cysts.

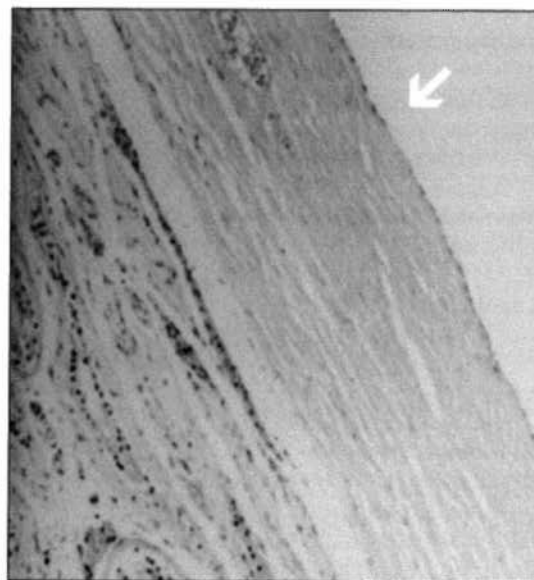


Fig 3.—H & E stain of testicular cyst. Note flattened epithelium lining cyst cavity.